

## **Dedication: The Life, Career and Major Achievements of Brian Roy Stuckenberg (1930–2009)**

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# African Invertebrates

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## Gedenkschrift for Brian Roy Stuckenberg (1930–2009)



Three years ago our esteemed colleague Brian Stuckenberg, the doyen of Afrotropical dipterology, left his professional fraternity and this world. Time flies like an arrow, yet our memories of Brian do not fade. This is best attested by the present issue of *African Invertebrates* that commemorates Brian's life and scientific career with contributions made by 37 fellow dipterists from 15 countries.

The Gedenkschrift opens with a dedication article by A.H. Kirk-Spriggs, who provides a biography and summary of Brian's major achievements. The article is supplemented by Brian's previously unpublished reports on his two Madagascan expeditions and includes a full list of his publications.

The following 20 articles deal with the taxonomy, nomenclature, systematics and biogeography of representatives of 19 families of nematoceran and brachyceran Diptera. In total, four new genera and 58 new species are described, with one genus and 16 species named after Brian. Most papers include identification keys. All articles are of a high standard and make a substantial addition to our knowledge of Afrotropical Diptera, still I would like to highlight several contributions. T. Dikow's detailed review of the Mydidae tribe Halterorchini is the first cybertaxonomic article in the history of *African Invertebrates*. By providing hyperlinks to ZooBank, Morphbank and GBIF, it sets a new standard for future taxonomic publications in the journal. J.-H. Stuke's revision of *Stylogaster* (Conopidae) is the most comprehensive and richly illustrated study done on this genus in the Afrotropics, and is directly linked to Brian's interest in this genus back in 1960s. Brian also had a particular interest in the bruchomyiine moth flies (Psychodidae) and himself contributed to the study of fossil and modern representatives of the genus *Nemopalpus* in the article prepared by R. Wagner.

The Afrotropical Diptera fauna is still far from being exhaustively known, and Brian's legacy for the present and upcoming generations of dipterists is to study it in its entirety.

I wish to thank all contributors to this Gedenkschrift and numerous reviewers, who critically evaluated all the manuscripts. Dr A.H. Kirk-Spriggs solicited contributions, co-ordinated the peer-review process and handled correspondence with the authors; this

project would not have succeeded without him. I am grateful to Prof. D.J. Brothers, who expertly commented on numerous manuscripts and generously undertook the laborious task of language editing; copy-editing was also done by Prof. M.B. Markus. I sincerely appreciate meticulous work of Mr B. Muller, our graphics editor, and Dr M. Ovechkina, who did the proof-reading of each article and the entire issue. Last but not least, I would like to express my deep gratitude to the Deputy Director of the KwaZulu-Natal Museum Mr S. Miya and the Chief Financial Manager Mr M. Mazibuko for their overall and financial support of the journal. I regret that some manuscripts could not be included in this Gedenkschrift due to technical reasons; they will be published in the next issue of *African Invertebrates*, thus continuing to commemorate Brian.

**Mike Mostovski**

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## **Dedication: the life, career and major achievements of Brian Roy Stuckenberg (1930–2009)**

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### **ABSTRACT**

A biographical sketch of Brian Stuckenberg (1930–2009) is provided. Brian's research interests, discoveries and major achievements are outlined and his contributions to the study of dipterology in general are put into broad context. A list of Brian's publications is provided, together with a transcription of the itinerary and list of collecting localities from the first (1955–1956) and second (1957–1958) Madagascan expeditions.

**KEY WORDS:** Brian Stuckenberg, achievements, biography, career, dedication, Diptera, KwaZulu-Natal Museum, bibliography.

### **DEDICATION**

With Brian Stuckenberg's death on 8 February 2009, Africa lost a leading scientist regarded by many as 'the father of modern African dipterology' (D.A. Barraclough pers. comm., 2010). Brian was a formidable scholar with an encyclopaedic knowledge of the dipterological literature. He was always courteous, in many ways shy and reserved, with an analytical and rational mind, always taking great care in the logic of his thinking and in the answers he provided.

He was in many ways unusual among South African entomologists, in that he took a strong interest in more theoretical and philosophical aspects of biological enquiry, especially phylogenetic systematics and biogeography. His understanding and knowledge of geology was extensive, and he could converse intelligently with professional geologists on all manner of technical matters. This extensive grounding in geology provided him with a profound understanding of historical biogeographical problems.<sup>1</sup>

In a distinguished career that spanned 56 years, Brian published over 100 publications, including studies of at least 23 families of Diptera (see Appendix I).<sup>2</sup> He collected extensively in South Africa, as well as Angola, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Swaziland, Zimbabwe, Chile and Argentina (B. Muller pers. comm., 2012), and during the 20 years he was Head of Entomology at the Natal Museum, South Africa, he emerged as Africa's leading dipterist, building one of the largest collections of Afrotropical flies in the world (Londt & Deane 2009). He actively encouraged the study of this collection by specialist researchers and the number of scientific publications that resulted laid the foundations of modern African dipterology as we know it today (Stuckenberg & Mostovski 2006).

As a mark of the respect in which he was held by his peers, over 100 species and five genera of Diptera were named in his honour<sup>2</sup>, together with taxa in at least 11 other insect orders (Coleoptera, Dermaptera, Heteroptera, Hymenoptera, fossil Grylloblattida, Lepidoptera, Neuroptera, Odonata, Plecoptera, Psocoptera, Strepsiptera) and four other classes of invertebrates (Malacostraca, Oligochaeta, fossil Ophiuroidea, Tardigrada) (M. Mostovski pers. comm., 2012). A substantial number of genera and species are named after Brian in the present volume.



This paper aims to be a biographical sketch of Brian's life, career and major achievements, and serves as an introduction to this special Gedenkschrift issue of *African Invertebrates*, being a celebration of Brian's career and outstanding contributions in the fields of dipterology and museology.

#### BIOGRAPHY

The Stuckenberg family is of Danish descent. Brian's great uncle was the famous Danish National Poet Viggo Henrik Stuckenberg (1863–1905) (Fig. 1), who is best known for his love poems to his wife Ingeborg (*née* Pamperin) (*e.g.*, Fig. 2). His better-known works include: *I Gennembrud* (1887), *Messias* (1889) and *Vejbred* (1899).

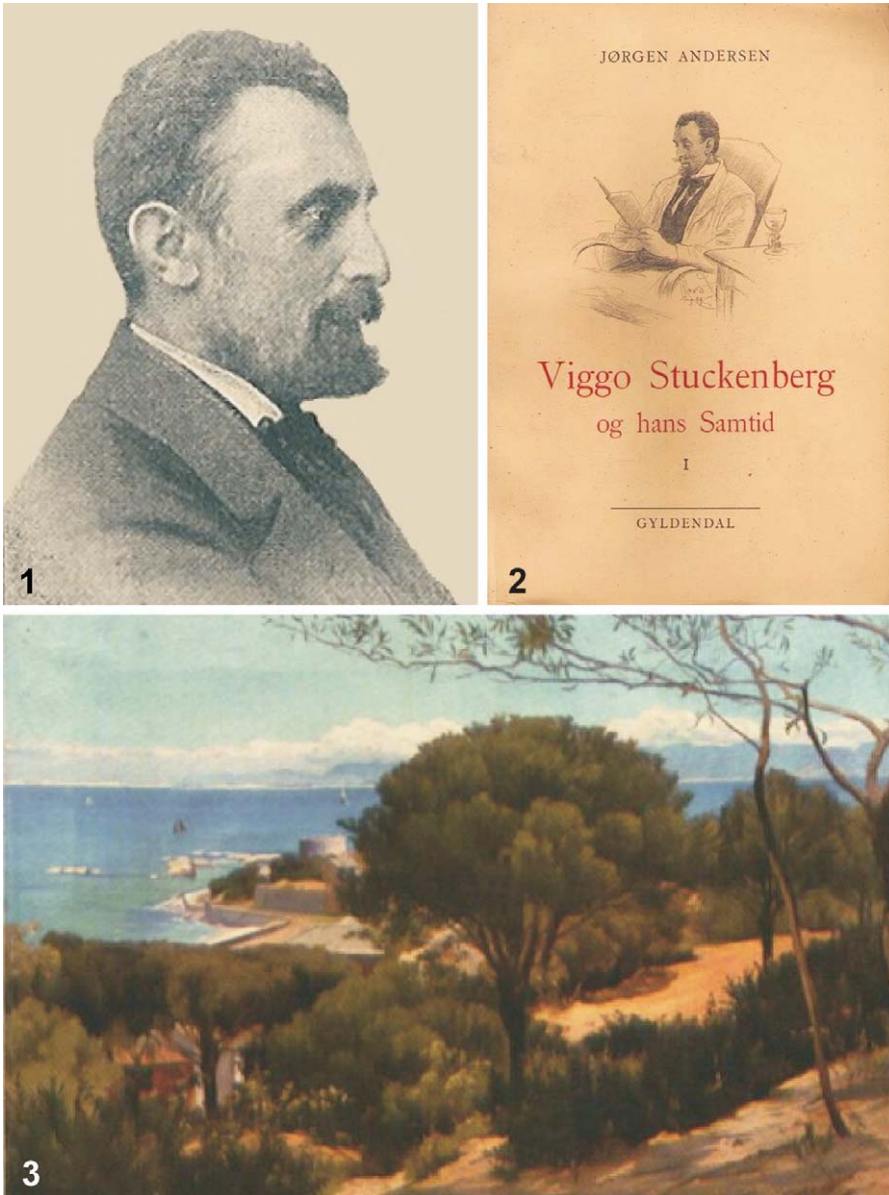
Brian's paternal grandfather was the Danish painter Børge Fog Stuckenberg (1867–1942). Børge studied at the Danish Academy in Copenhagen, between 1883 and 1889, and arrived in Cape Town in *ca* 1896. There are early paintings of South African subjects by him dating from 1887, which suggests that he made an earlier visit before settling in Cape Town. His address in 1898 was given as 17 Ebenezer Road, Sea Point, Cape Town.<sup>3</sup> Seascapes and flowers were popular themes of his paintings (*e.g.*, Fig. 3) and the Stuckenberg family own several of his works.<sup>5</sup> As Børge was a struggling artist, Brian's grandmother, Benedicta (*née* Errebo), also Danish, ran a haberdashery, essentially '... to make ends meet'.<sup>4</sup>

Brian was born on 7 April 1930, in Fifth Avenue, Walmer (directly opposite Baakens Valley), in the Eastern Cape of South Africa. He was the elder of two sons born to Hans Tyge Stuckenberg (1900–1976) and Beatrice Stuckenberg (*née* Nicholas) (1897–*ca* 1978), his brother Russell being five years his junior (Figs 4, 5). In 1930 Walmer was a separate village that was later subsumed into the greater city of Port Elizabeth. As Brian's grandfather Børge was an artist, money was never a priority and Brian's father Hans was largely responsible for his own education past the essential early years. Hans served in the Signals Corps on the Western Front during WWI and as a Sergeant in the Home Guard during WWII<sup>21</sup>, after which he became a technician with the GPO and was responsible for the installation of many of the telephone exchanges in the Eastern Cape Province. Brian's mother Beatrice, was Australian, born in Adelaide, and was what is today termed a stay-at-home mum.<sup>4,21</sup>

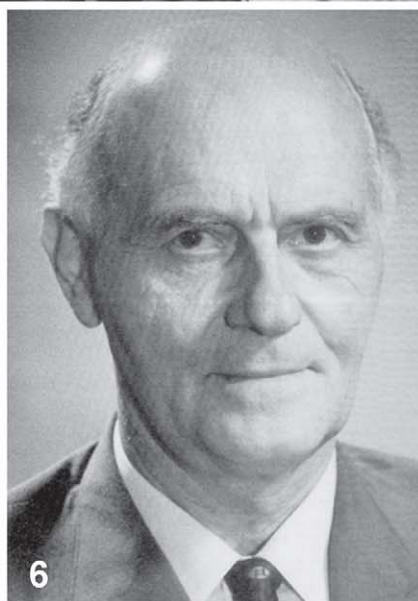
Brian developed an interest in zoology from a young age (Londt & Deane 2009). His brother Russell noted that he knew very little about Brian, because as soon as Brian returned home from school each evening he would disappear into the *veld*, looking at nature, collecting birds' eggs and snakes, from which he derived pocket money by selling these to the Port Elizabeth Snake Park.<sup>4</sup>

Brian's interest in zoology was actively encouraged by John A. Pringle (1909–2001) (Fig. 6), then Director of the Port Elizabeth Museum and Snake Park (1937–1953), now Bayworld, and later Director of the Natal Museum (1953–1974) (Londt & Deane 2009). John Pringle took a liking to the youngster, giving him odd jobs in the Snake Park and encouraged his university studies (Guest 2006: 125). The Annual Reports of the Port Elizabeth Museum for the years 1946–1950, state that Brian donated a collection of birds' nests and eggs in 1946<sup>7</sup>, birds' eggs in 1947<sup>8</sup> and a Black-tailed Dassie in 1950<sup>9</sup>. Brian's collection of birds' eggs eventually found its way to the Muséum national d'Histoire naturelle, Paris, France. The circumstances surrounding the 'donation' remain unclear, although it was certainly arranged by Professor Jacques Berlioz (1891–1975), Director

of the Laboratory of Zoology (Birds and Mammals).<sup>5</sup> Otherwise, Brian's boyhood free time was spent fishing, providing the family with many a fish dinner. Fishing remained a life-long passion with Brian, and he would later comment to colleagues 'Oh to be out collecting or fishing in weather like this'.<sup>1</sup> Brian seemed to particularly like sea-shore



Figs 1–3. (1) Viggo Henrik Stuckenberg (1863–1905), Brian's great uncle (after [http://de.wikipedia.org/wiki/Viggo\\_Stuckenberg](http://de.wikipedia.org/wiki/Viggo_Stuckenberg)); (2) cover page of Viggo Stuckenberg's *og hans Samtid*; (3) oil on canvas, *The Martello Tower and South Battery – Simonstown* (1932), by Børge Fog Stuckenberg (1867–1942), Brian's paternal grandfather (<http://art.findartinfo.com/art.asp?i=120&p=163&old=1>).



Figs 4–6. (4) Brian (left) about six years of age, pictured with his mother Beatrice (with younger brother Russell on lap); (5) same, with Brian's father Hans Tyge Stuckenberg (Figs 4, 5 courtesy I. Stuckenberg); (6) Brian's early mentor, John A. Pringle (1909–2001), when Director of the KwaZulu-Natal Museum (courtesy KwaZulu-Natal Museum).

angling, and contrasted the excellent rocky-shore angling of the Eastern Cape with the dull sandy shore of KwaZulu-Natal.<sup>1</sup> In 1972 Brian even undertook a special fishing trip to Angola and while there collected an intriguing new genus of limnophorine Muscidae, named *Ocypodomys* by Pont (2006). This was collected from borrows of *Ocypode* crabs at the mouth of the Cuanza River, one of Africa's great, but little-known rivers.<sup>1</sup> Brian's passion for fishing can be fully appreciated in the following passage in a message to Gregory Courtney in 1998: 'Speaking of nematocerans, my new Hardy flyrod was well and truly broken in last weekend when I was fly fishing on a dam in the midlands here; it was a hot day and no trout were moving, but a spectacular thunderstorm developed, followed by much cooler, heavily overcast conditions. This stimulated a truly massive emergence of a chironomid species, and the rainbows went into a feeding frenzy; I lacked a good imitation in my fly box, but a small, drab nymph eventually got me four, the biggest about two and a half pounds. Just sometimes I get lucky!'.<sup>20</sup>

Brian attended Grey High School in Port Elizabeth.<sup>4</sup> Little is known regarding his school career, but his widow Pamela informed me that what his family did not know was that Brian would write his own excuse notes if there was something of interest in the bush, and that at the age of 13 he and a friend bicycled to Knysna, each telling their respective parents that they were visiting the opposite family.<sup>5</sup>

Brian matriculated from Grey High School in 1947 with a second-class Senior Certificate (C.M. Crulci pers. comm., 2010), after which he enrolled at Rhodes University in Grahamstown, where he completed his Bachelor of Science degree in 1950, his Honours degree in 1951 and his Masters degree in 1953.<sup>2</sup> Although Brian's father Hans was an avid 'rock hound' (his collection of 'stones' is still in Pamela Stuckenberg's possession), Brian's life-long interest in geology was probably sparked by the field excursions he undertook while an undergraduate with the then Professor of Geology at Rhodes, Edgar Donald Mountain (1900–1985) (Fig. 19).<sup>18</sup> Brian later remarked that he would have pursued a career in geology if he had not chosen entomology.<sup>1</sup> Hugh Eales wrote: '... he [Brian] and I were in the same geology class for three years, 1948–50. A quiet, reserved man, but good student, with an obvious leaning to the world of living things rather than the rocks in which their fossilised remains were preserved'.<sup>29</sup> Brian was a member of the Rhodes University Rowing Club and also obtained an orange belt in Judo.<sup>18</sup> While an undergraduate he undertook considerable work for James Leonard Brierley Smith (1897–1968), the renowned South African ichthyologist accredited (probably bogusly, see Hodgson & Craig 2005: 5) with the identification of the first extant Coelacanth (*Latimeria chalumnae* Smith). When summoned to tea with 'Fishy Smith' (as he was known to his students) one day, Brian found him barefoot, up a tree eating fruit and was invited to join the feast!<sup>5</sup>

Brian's Masters thesis was entitled '*Studies of Paragus (Diptera, Syrphidae)*', for which he was awarded a distinction in 1953 (Stuckenberg 1953). Brian was supervised by another Grahamstown eccentric, Joseph Omer-Cooper (1893–1972) (Fig. 12), who insisted on always wearing broad-rimmed hats and was adorned by an ancient, mildewed academic gown during lectures (Hodgson & Craig 2005). Brian was impressed with Prof. Omer-Cooper's dress sense, especially the fact that he never wore socks!<sup>19</sup>

The first student from Rhodes with Entomology as a major graduated in 1949 (Hodgson & Craig 2005), and Brian was certainly one of the first to graduate with a Masters degree from the Department of Zoology and Entomology at Rhodes. In the acknowledgments



of his thesis Brian thanked both J. Omer-Cooper and Edward McC. Callan (1911–1996), the latter with whom he would later embark on his first expedition to Madagascar in the mid 1950s.

Two publications resulted from his Masters thesis (Stuckenberg 1954*a, b*). Both of these publications bear testament to Brian's meticulousness, his early descriptive powers, and his ability as an illustrator. Years later in 1982, in a letter to J.R. Vockeroth, Brian wrote: 'The study I did on *Paragus* all those years ago is now so dim in my memory that I cannot recall the precise source of the specimen upon which the drawing of the terminalia of *P. "bicolor"* was based ... I must say it is strange to read a paper I wrote so long ago! I have a glimpse of myself as another, younger person. This must be an experience only authors can have'.<sup>27</sup>

Brian was appointed as Scientific Officer in Entomology at the Natal Museum on 1 December 1953, where he was to remain his entire professional career. Brian's former mentor, John Pringle, was then Director and Brian would succeed him as Director in 1976. Due to uncertain Government funding, Brian's appointment was initially only for three years. Two months after his arrival Pringle was pleased to report that he already '... showed real enthusiasm, energy and enterprise in his work'. At the end of his three-year tenure Brian was appointed to the full-time staff in December 1956 (Guest 2006).

Brian married Pamela Jean Usher on 12 April 1958, at St Michael and All Angels Church, Blantyre, Malawi (Fig. 7), the same church at which Pamela's parents had been married on 15 April 1929.<sup>5</sup> Pamela was also an entomologist and first met Brian while a student at the University of Natal, Pamela's Professor acting as cupid. Although not formally employed at the Natal Museum, Pamela was in receipt of a series of grants from the CSIR and worked on the systematics of Tabanidae<sup>11</sup>, publishing a series of taxonomic papers under her maiden name in the *Annals of the Natal Museum* (e.g., Usher 1970, 1971, 1972).

Immediately following their marriage, Pamela and Brian travelled to the Zomba Plateau in the Shire District of southern Malawi for their honeymoon. There Brian collected a remarkable psychodid larva occurring in the torrential streams. Brian always referred to this as the 'Honeymoon Fly', and its phylogenetic relations turned into a fascinating story; its conclusive identification took an additional collecting trip with Jason Gilbert Hayden Londt in 1980 and more than two decades to resolve (see Duckhouse 1985). Pamela accompanied Brian on many of his collecting trips and there are thousands of specimens they collected together bearing the label 'B. & P. Stuckenberg' in the collections of the KwaZulu-Natal Museum. While in the field together they developed some novel collecting techniques for Tabanidae, one of which involved Pamela driving the vehicle in extra-low ratio while Brian would stalk along at the back and yell – STOP – followed by a crash as he swiped at a tabanid. He would then slowly and carefully circle the car staring at the sides and tyres, tabanids being attracted to the shadowed 'under belly' of the beast and the hot dark tyres.<sup>19</sup> Over the following years Brian and Pamela had three children together, Ingrid (b. 1960) (Fig. 20), Katherine (b. 1962), and David (b. 1965, born while Brian and his family were on sabbatical in London).<sup>16,17</sup>

In September 1983, Brian made a collecting trip to Namibia with Jason Londt. This trip was the source of one of Brian's favourite anecdotes. Brian liked to recall that while collecting on a hillside above Lüderitz Golf Course, a site downwind of the municipal dump, he noticed a crunched-up piece of paper lodged in a thorn bush. He said he did

not know why, but he reached out his hand and pulled out the paper. When Brian spread this out his name was clearly printed at the top. It was a page of a report published in one of Namibia's scientific journals!

Brian attended a number of Dipterological Congresses during his career, including the Third International Congress of Dipterology in Guelph, Ontario, Canada, 1994 (Fig. 21), at which he was elected as an Honorary Member, then the first person in Africa and fourth in the world to receive such an award. The last congress he was able to attend was the Fifth International Congress of Dipterology in Brisbane, Australia in 2002 (Fig. 22). He complained to me bitterly that he could not attend the Sixth International Congress of Dipterology, held in Fukuoka, Japan in September 2006, as he was (then being over 70), unable to secure travel and medical insurance. Brian was also elected as an Honorary Life Member of the Entomological Society of Southern Africa in 1999.

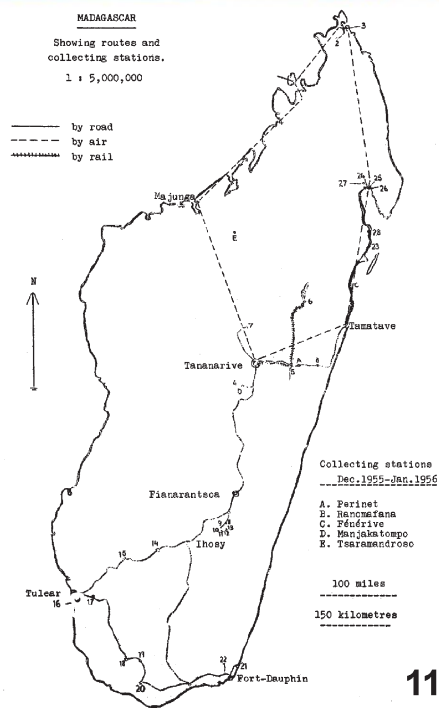
#### DIPTERA

From the very beginning of his entomological career Brian decided to specialize in the Diptera, which he regarded as the most important group of insects.<sup>1</sup> Shortly after his appointment he began to work extensively in South Africa, undertaking numerous field trips (e.g., Fig. 8) and amassing a large collection. In the first year of Brian's employment (1954) alone he undertook fieldwork in the Cathedral Peak area, Giant's Castle, Royal [Natal] National Park, Underberg area, Garden Castle, Sani Pass, Kamberg, Karkloof, Howick and Inchanga (some more than once), obtaining nearly 500 specimens of Diptera.<sup>12</sup> In the first three years of his employment (1954–1956), he increased the Diptera holdings by 3,900 specimens.<sup>12,13,14</sup> These early field trips must have helped shape the biogeographical concepts on which he later published.

Brian's interest in the Blephariceridae developed early in his career. In 1955 he published his first paper on the group (Stuckenberg 1955a), dealing with the South African species. Seven new species and one new subspecies were described in that work. Likewise, Brian developed an interest in the 'Rhagionidae' during the same period, and published his first paper on the group in the same year (Stuckenberg 1955b). Brian went on to deal with the 'Rhagionidae' fauna of South Africa, which was published in the *South African Animal Life* series (Stuckenberg 1960).

It was also during this period that Brian became intrigued by the biogeographical significance of the Diptera fauna of Madagascar and undertook two expeditions there. Brian wrote: '... a special objective [of these expeditions was] to search for what seemed to be the Gondwanan elements that were already known in South Africa' (Kirk-Spriggs & Stuckenberg 2009: 180).

The first expedition was undertaken in December 1955 and January 1956, the hottest and wettest months in Madagascar. Brian was accompanied on this expedition by the renowned South African arachnologist and former Director of the Natal Museum, Reginald Frederick Lawrence (1887–1987) (Fig. 13), and his former Rhodes Senior Lecturer, Edward McC. Callan.<sup>1,26</sup> Callan was principally interested in collecting Hymenoptera, while Lawrence concentrated on Arachnida, Crustacea, centipedes and millipedes.<sup>26</sup> The expedition visited five collecting localities (see Appendix II): Perinet ('A typical primary inland forest at medium altitude'), Ranomofana ('A semi-open forest at low altitude'), Fenerive ('A typical coastal forest at sea level'), Ankaratra Mts. ('A montane forest at 6–7000 ft. altitude'), and Majunga ('A deciduous forest at



Figs 7–11. (7) Brian and Pamela's wedding day 12 April 1958 at St. Michael and All Angels Church, Blantyre, Malawi; (8) Brian sampling Blephariceridae in upland torrential streams of the Natal Drakensberg, ca 1960; (9) Brian back to Beira from his trip to Madagascar (1958); (10) one of Brian's Madagascan collecting localities, Roussettes Forest Station (sampled 23.11–4.12.1957); (all courtesy P.J. Stuckenberg); (11) Original sketch map from Brian's unpublished report of his Madagascar Expedition (1957–1958), with collecting localities indicated with numerals<sup>6</sup> (refer to Appendix III).

low altitudes ...').<sup>26</sup> Brian's attention was largely confined to the Diptera, although he also collected Hemiptera, Embioptera, Strepsiptera, Ephemeroptera, Trichoptera and Psocoptera, most specimens of which were pinned into boxes in the field.<sup>26</sup> His Diptera collection amounted to 2,200 specimens.<sup>14,26</sup>

Back in the 1950s Madagascar was still *terra incognita* dipterologically and, excited by what his collecting had revealed, Brian applied to the Council for Scientific and Industrial Research (South Africa) (CSIR), for the funding to undertake a second more extensive expedition. Brian's application was successful and, following discussions with Renaud Paulian (1913–2003) (Fig. 15), then Deputy Director of the Institut Scientifique de Madagascar, a comprehensive itinerary was arranged which would occupy four months during the hottest and wettest period of the summer season.<sup>6</sup> On parts of this expedition he was accompanied by Alfred 'Fred' Jakob Keiser-Jenny (1895–1969) of the Basel Museum and his wife, Renaud Paulian and also Paul Elexis Jacques Griveaud (1907–1980) (Fig. 16) a lepidopterist who was actively encouraging entomological research on the island and was engaged in a revision of Madagascan Sphingidae (Lepidoptera).<sup>1,6</sup> Griveaud was raised in Madagascar, and was well versed in the country, its peoples and customs. Brian liked to recall being wedged between Griveaud and Paulian on a long drive somewhere and how the Frenchmen had light-heartedly tackled him on the validity of sexual selection. Griveaud scoffed that only an Englishman could have thought up such an absurd concept.<sup>1</sup>

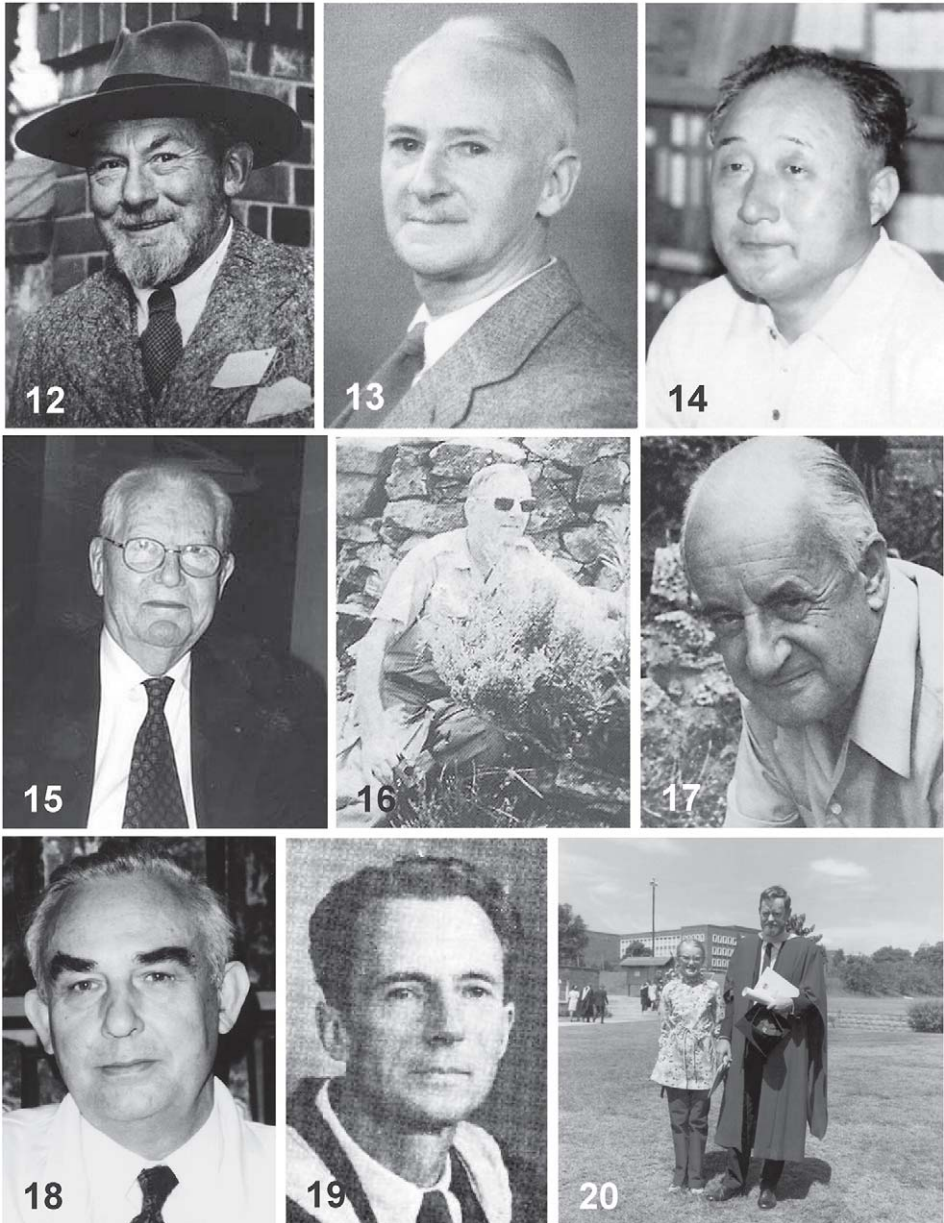
Brian arrived in Madagascar on 2 November 1957 and collected extensively in many parts. As he wrote in his unpublished report: 'My sphere of activities ranged from the extreme north to the extreme south of the island, to points on both the east and west coasts, and included the summits of two of the highest mountains ... finally I left Madagascar on the 8 April 1958'<sup>6</sup> (Fig. 9). Brian calculated that he had travelled 5,276 kilometres on the island, excluding 410 kms by rail, visiting 28 different collecting localities (Figs 10, 11; Appendix III), and accumulated thousands of flies, all of which were field-pinned to his exacting preparatory standards. These two expeditions were unquestionably a major highlight of Brian's life and career.<sup>1</sup>

In 1959, Brian's revision of Madagascan Blephariceridae, resulting from his first Madagascan expedition (only) was published (Stuckenberg 1959). Brian wrote that his paper was '... the first publication in English to apply Hennig's theory of cladistics'.<sup>2</sup> This is remarkable, given that an English translation of Hennig's (1950) book would only appear several years later, in 1966.

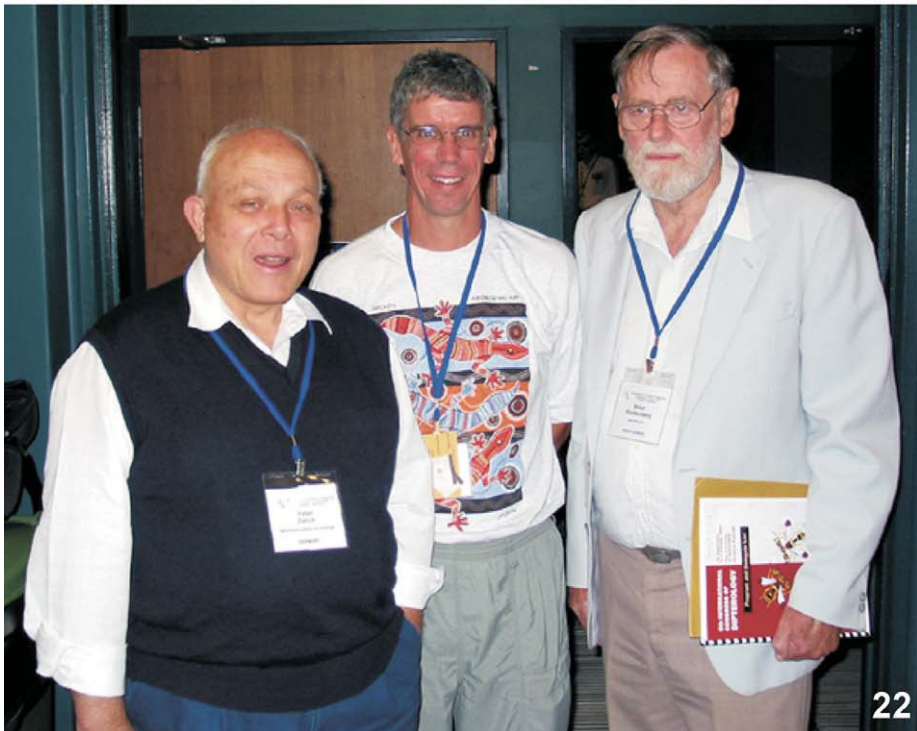
Brian's correspondence with Willi Hennig in the 1950s led him to immediately perceive the profound significance of Hennig's novel ideas and Brian remained a staunch adherent of Hennigian thought (see below). Unfortunately, published in an obscure Malagasy journal, Brian's ground-breaking paper was overlooked by the mainstream systematic community. As Greg Davies wrote in his unpublished reminiscences of Brian, 'Brian was always proud of his pioneering 'bleph' work, and I think slightly aggrieved it was so ignored by other researchers'.<sup>1</sup>

An extract from Brian's correspondence with another blepharicerid specialist, Gregory Courtney (dated 26 July 1991), gives some indication of Brian's insights into Blephariceridae microhabitats in Madagascar: 'I soon learned that every waterfall, cascade, and even wet rock surface had to be checked, because members of this family could survive on astonishingly small sites provided there was regular rainfall in the





Figs 12–20. (12) Joseph Omer-Cooper (1893–1972); (13) Reginald Frederick Lawrence (1887–1987); (14) Akira Nagatomi (1928–2005); (15) Renaud Paulian (1913–2003); (16) Paul Elexis Jacques Griveaud (1907–1980); (17) Harold Oldroyd (1913–1978); (18) [Emil Hans] Willi Hennig (1913–1976); (19) Edgar Donald Mountain (1900–1985); (20) Brian's PhD graduation at the University of Natal (1972), pictured with daughter Ingrid. Sources of photographs: (12) Rhodes University archives; (13) Guest (2006: 94); (14, 15, 17, 18) courtesy N.L. Evenhuis; (16) Andriamialisoa & Langrand (2003); (19) Rhodes University website; (20) courtesy P.J. Stuckenberg.



Figs 21, 22. (21) Third International Congress of Dipterology in Guelph, Ontario, Canada (1994), left to right: Marc Pollet, Alain Maibach, Patrick Grootaert, Vera Cristina Silva, William J. Turner, Tore Nielssen and Brian (far right) (courtesy P.J. Stuckenberg); (22) Fifth International Congress of Dipterology in Brisbane, Australia (2002). World Blephariceridae researchers: Peter Zwick (left), Gregory Courtney (centre) and Brian (right) (courtesy G. Courtney).

summer. It appeared that *Paulianina* could spread into small hills adjacent to the eastern coast, provided there was at least one waterfall in a stream coming through the forest on those hills. A typical situation was ... a stream emerging from forest on the foot of a slope; on ascending up the banks, I would find it coming from a pool below a waterfall fed by a headwater stream emerging from ... the summit of the hill. The blepharicerids were limited just to the waterfall, and I would find the adults dancing over the foam, or hanging from nearby ledges extending over the water. At sites in the higher country of the interior, I sometimes found, out in the open sun, rock faces wetted by constant seepage and often with extensive slime growth caused by algae and iron-fixing bacteria, on which *Paulianina* larvae were almost entirely hidden by such growth. It was impressive to see how these flies had spread about, and I wondered about the validity of the biogeographical ideas of H.H. Ross who considered that ancient lines of Trichoptera had never adapted to the tropics'.<sup>20</sup>

Brian had submitted his Madagascan Blephariceridae research to the University of Natal as a potential PhD thesis, but there was a problem with Brian's supervisor, Prof. Sydney Frank Bush (1903–1969), a long-serving member of the Natal Museum Council (1936–1969) (Pringle 1970). Brian explained that Bush '... could not understand or did not agree with the Hennigian approach to phylogeny and biogeography'.<sup>1</sup> The upshot was that Brian did not receive a doctorate for this ground-breaking research.

In 1965 Brian published a major paper dealing with the Rhagionidae he collected during his two expeditions to Madagascar (Stuckenberg 1965). At that time only a single species of rhagionid was known from there. Brian added 27 new species and included some interesting biogeographical insights.

In 1965 and 1966 Brian made research visits to various European museums in Austria, Greece, Switzerland, Germany and the United Kingdom, to study types of 'Rhagionidae' and for his on-going revision of Old World Lauxaniidae genera. These included a trip to Vienna, Austria to study the material examined by Friedrich Hendel and to the Natural History Museum, London.<sup>15</sup>

South Africa, then in the throes of apartheid, was largely isolated from the outside world and these visits gave Brian the rare opportunity to meet leading dipterists of the day. At that time, the Natural History Museum was at the forefront of dipterological progress and a hive of activity and innovative thought. Brian spoke fondly of long discussions over pub lunches with the likes of Adrian Pont, Harold Oldroyd (Fig. 17), Ken Smith, Brian Cogan, Tony Hudson, David Hollis, John Quinlan and Bernard Clifton. Adrian Pont wrote: 'I think he [Brian] was surprised, and slightly shocked, by the amount that we ate and drank! But he was always good company'.<sup>17</sup> Brian also clearly relished the opportunity to attend scientific meetings during his protracted stay in London. In his 1966 Annual Report (p. 10), he wrote: 'Attendance at the meetings of the Royal Entomological Society of London, of which I have been a Fellow for eleven years, always was a stimulating experience and provided opportunities for making the acquaintance of many distinguished entomologists'.<sup>15</sup>

One of the oddest flies Brian ever worked on was *Tongamyia miranda* – 'the extraordinary fly from Tongaland', which Brian discovered in Ndumo Game Reserve and described in 1966. This strange fly, with tentorial pits forming holes running through the full length of the head, was originally classified as an apiocerid. Mike Irwin and Brian would go on to discover the larvae and describe them (Irwin & Stuckenberg 1972). More



recent morphological and molecular studies by Irwin and Wiegmann (2001) led to the re-classification of *Tongamyia* Stuckenberg as a basal mydid and the description of a second species of the genus (*T. stuckenbergi*), recorded from Namibia and Angola.

In 1971 Brian published his major paper on Old World lauxaniid genera (Stuckenberg 1971). He provided an excellent key, erected 13 new genera, placed three genera in synonymy, raised four subgenera to generic status, and transferred one genus to the Heleomyzidae. In 1972, Brian was finally awarded his PhD by the University of Natal for his excellent research on Old World Lauxaniidae (Fig. 20).

In 1973 Brian helped sort out the heterogeneous muddle of diverse brachyceran flies that at that time represented the Rhagionidae (Stuckenberg 1973). Most importantly, he erected the new family Athericidae, a family more closely allied to the Tabanidae than the Rhagionidae. Later he dismembered the remaining Rhagionidae into three families (Stuckenberg 2001).

After Brian's official retirement in 1994, he continued as Director *Emeritus* and Honorary Research Associate of the Natal (later KwaZulu-Natal) Museum. During this period Brian eagerly dove back into specialist research on the Diptera and began again to collaborate with entomologists from around the world (Londt & Deane 2009). From 1994 to the time of his death he published a series of superlative papers which dealt principally with the phylogenetically enigmatic and biologically fascinating 'wormlions' (family Vermileonidae).<sup>1</sup> The semi-opaque larvae form conical pits in shaded areas with fine sand in order to trap their prey, in exactly the same fashion as ant-lions (Neuroptera). Brian encouraged many entomologists and other individuals, including David Barraclough, Vincent Whitehead, Mike Irwin, Jason Londt, Rebecca Fowlds, Mervyn Mansell and me, to sieve these out of the sand and send them to him in a dry tube with sand for rearing purposes. He became highly adept at raising these little 'demons of the dust' in sand-filled ice-cream tubs. Discoveries of new vermilionids came thick and fast, and Brian drolly observed that every time he published a revision of one vermilionid genus, a new wormlion from that genus would then proceed to emerge from an ice-cream tub at his home, immediately rendering his revision out of date.<sup>1</sup>

In 1977, Akira Nagatomi (Fig. 14), one of Brian's long-standing and valued correspondents, had formally separated the vermilionids from the remaining rhagionids at the familial level. Brian was in full agreement with this assertion and over the years Brian would revolutionise our understanding of the southern African vermilionid fauna. His papers on this group demonstrated that southern Africa '... has the world's largest and most diverse vermilionid fauna' (Stuckenberg 2000b: 182). Of particular interest to dipterists generally was his description of vermilionids with elongated proboscides in genera such as *Namaquamyia* Stuckenberg and *Perianthomyia* Stuckenberg. Clearly these species are adapted to nectarivory, although the floral hosts involved and their co-evolution with the flies remain unknown.<sup>1</sup> Later Brian provided additional examples of rostrum elongation as a notable adaptation in various families of Diptera, including the Rhagionidae, Tanyderidae, Sciaridae and Ceratopogonidae that are principally associated with the specialised flora of the Cape region of South Africa (Kirk-Spriggs & Stuckenberg 2009: 158–159).

Brian's vermilionid research indicated two distinct clades were discernable in the Vermileonidae, what he termed a 'Laurasian clade' and a 'Gondwanan (African Plate) clade' and he mooted that they should possibly be separated into separate families

(Stuckenberg 2001: 36). He suggested ‘... that the Laurasian and African Plate vermilionid faunas were separated for at least the entire duration of the Cretaceous Period, because the Tethys Sea lay between them throughout that long interval’ (Stuckenberg 2000b: 199). Brian showed that the two clades had proceeded along different morphological lines of evolution, especially in their mouth-parts. The Laurasian genera all have short, plesiomorphic proboscides without the specialised morphological adaptations for extracting nectar from deeply recessed floral nectaries apparent in most of the Afrotropical genera, a fact Brian thought ‘remarkable’ (Stuckenberg 2000b: 199).

One of the most significant and widely cited papers, which Brian published in his post-retirement period, was a comprehensive paper dealing with antennal evolution in the Brachycera, with a reassessment of terminology relating to the flagellum (Stuckenberg 1999). In this paper he described an antennal transformation series in the Vermilionidae, proposing this as a paradigm of antennal evolution in the Brachycera. He further proposed a revised terminology for components of the brachycerous antenna and suggested that the emergence of the Brachycera from nematocerous ancestors involved coevolution of antennal transformation and pseudotracheate labella, linked to a new feeding mode appropriate in new floras that appeared in the Triassic and Jurassic (Stuckenberg 1999).

Brian’s last publication was the chapter ‘Afrotropical Diptera – rich savannas, poor rainforests’, which he and I prepared together for the book *Diptera diversity: status, challenges and tools* (Kirk-Spriggs & Stuckenberg 2009). This chapter was based on our presentations at the 5<sup>th</sup> International Congress of Dipterology in 2002. This chapter presented the opportunity to outline some of Brian’s major assertions and ideas central to his thinking on biogeographical questions.

At the time of his death there were several important incomplete projects that he was engaged in. For example, a taxonomic revision of the southern African athericid fauna, in which he elegantly showed that the athericids of the cool, fast-flowing, stony-bottomed mountain streams had become (or were becoming) amandibulate in the females and had lost (or were losing) their ancestral trait of blood sucking.<sup>1</sup> Other uncompleted projects include an updated world classification and phylogenetic study of bruchomyiine psychodids (Wagner & Stuckenberg 2012) and, perhaps most significantly, a detailed investigation of the head morphology of adult Lower Brachyceran flies.<sup>1</sup>

#### BIOGEOGRAPHY

By the early 1960s some of Brian’s biogeographical concepts had begun to gel together. He had lived through the exciting period of the confirmation of plate tectonics and fragmentation of Gondwana in the 1960s and 1970s, and would frequently reflect on the profound change in orthodox geological thought that occurred during his lifetime.<sup>1</sup> He had read Alex L. Du Toit’s landmark book *Our wandering continents; a hypothesis of continental drifting* (1937), which provided one of the first elaborations of continental relationships and drift (Kirk-Spriggs & Stuckenberg 2009: 177), and his understanding of disjunct austral distributions among various invertebrate groups with weak dispersal capabilities convinced Brian of the validity of Wegener’s views.<sup>1</sup> Brian was often critical of the lack of biogeographical insight on the part of many entomologists, particularly those based in South Africa. Following discussions at the January 1989 Forest Biome Annual General Meeting, for example, he wrote: ‘... it was also disappointing to hear

so much unscientific talk on matters biogeographical. Why is it that South African biologists, in so many fields, always seem decades behind developments overseas? I could sense that few people present had any real understanding of the significance of cladistics or of its role in biogeography'.<sup>28</sup>

In 1962 he published his paper 'The distribution of the montane palaeogenic element in the South African invertebrate fauna' (Stuckenberg 1962*a*). In this paper Brian underlined the significance of the Cape Fold Mountains, which are part of a Permo-Triassic orogeny that predates the break-up of Gondwana, as a repository of old, phylogenetically-isolated insect lineages, which he termed 'palaeogenic elements'. These mountains retain Afromontane forest fragments in gullies and along water courses and these upland forests have acted as refugia. The Cape Fold Mountains retain Gondwanan Blephariceridae, Psychodidae, Empididae, Africa's only tanyderid, and close-to-basal Chironomidae (Kirk-Spriggs & Stuckenberg 2009: 178). Brian also highlighted the significance of the Great Escarpment, known as the Drakensberg over much of its length, which was initiated in the east by the separation of Antarctica and south-eastern Africa in the Early Jurassic (*ca* 200 Mya). Stretching from the eastern highlands of Zimbabwe and the Limpopo Province of South Africa all the way round South Africa and through Namibia, extending as far north as Angola, the Great Escarpment represents one of southern Africa's topographical entities, retaining orographic rainfall and acting as refugia for sylvicolous insects during arid phases (Kirk-Spriggs & Stuckenberg 2009: 178). Brian emphasized that '... the Great Escarpment offered topographical and ecological conditions of great uniformity and continuity over an immense period of post-Jurassic time' (Stuckenberg 1995: 249). Brian's (1962*a*) paper remains one of few dealing comprehensively with this subject and is still widely cited in the literature 50 years after its publication.

Brian was particularly interested in the taxonomy and zoogeography of the bruchomyiine psychodid genus *Nemopalpus* Macquart, and published two papers on the South African species (Stuckenberg 1955*c*, 1962*b*). He noted that in South Africa they are associated with damp undergrowth in indigenous forests and are most active '... during overcast weather while rain was falling or shortly after there has been a downpour, when the forests were gloomy, dripping and rather cold' (Stuckenberg 1962*b*: 206). In the late 1980s, Brian visited Chile and found *Nemopalpus* in the equally damp *Nothofagus* forests. It therefore came as a great surprise to Brian to receive specimens of two new species of the genus from the arid desertic escarpment of Namibia! These new species (Stuckenberg 1978) had been discovered residing in rock hyrax retreats and their presence in this specialized habitat far from their congeners in the damp forests of eastern and southern South Africa sparked Brian's interest in the history of the Great Escarpment in Namaqualand and Namibia. More astonishing discoveries from the dry, western escarpment were to follow.<sup>1</sup>

During a collecting trip to Namibia in July 1988 Brian netted an extraordinary new species of the empidid genus *Homalocnemis* Phillipi, from flowers of the succulent *Arthraerua leubnitziae* (Kuntze) Schinz, growing on a flat windswept sandy plain at the edge of the Namib Desert. This genus was formerly known only from the cool, temperate forests of Chile and New Zealand (Chvála 1991*a*). Chvála was of the opinion that *Homalocnemis* is 'undoubtedly' of Gondwanan origin, since Africa, South America and New Zealand separated during the Upper Cretaceous (*e.g.*, Watkeys 2006), but

the discovery of the genus *Homalocnemimus* Mostovski in Middle–Upper Jurassic of Kazakhstan (Mostovski 1998) suggests that this lineage existed in Laurasia and Gondwana prior to break-up of the latter.

Another significant find of biogeographical interest was his discovery in September 1982 of a new species of the dolichopodid genus *Schistostoma* Becker on the exceedingly xeric Rooiberg Mountain of Namaqualand (Chvála 1991*b*). At that time the genus was only known to occur in the Holarctic Region and Brian's discovery represented a clearly-defined disjunction (Kirk-Spriggs & McGregor 2009). Two additional species, also from xeric localities in South Africa and Namibia (the Brandberg Massif), were subsequently described by Shamshev and Sinclair (2006).

Ten years earlier, in September 1972, Mike Irwin, then at the Natal Museum, had collected a specimen of the Gondwanan rhagionid genus *Atherimorpha* White, at Messelpadpas near Springbok, Namaqualand. The significance of this remarkable find was only realized with the publication of Nagatomi & Nagatomi's revision of the genus in 1990. *Atherimorpha* species generally occur in the moist, temperate forests, grasslands and fynbos of eastern and southern South Africa, and the Namaqualand species occurs over 400 km from its nearest relative, persisting as a lone relict in the Namaqualand hills.<sup>1</sup> Instances of close-to-basal insects surviving in refugia along the western Escarpment of Namibia and the Northern Cape of South Africa, greatly isolated from their closest relatives, convinced Brian that the ancestors of these taxa had spread up the western escarpment during wetter periods. Brian never published a synopsis of this phenomenon, although he frequently mentioned the topic in conversation with colleagues.<sup>1</sup>

In general Brian was dismissive of the Congo rainforest belt as biogeographically uninteresting, and always maintained that the rainforests of the Congo Basin were poor in fly diversity. He would often, and correctly, state that these forests were largely rooted in sand and that the Congo was a vast dune desert in the Miocene (*e.g.*, Kirk-Spriggs & Stuckenberg 2009: 164; Senut *et al.* 2009). Brian's conclusions regarding low Diptera diversity and abundance were given some support on a recent collecting trip I undertook to the Democratic Republic of Congo in 2010.

Brian was, however, sensitive to the fact that there must have been refugia in the lowland forests during traumatic episodes of aridification during the Neogene, and he frequently mentioned the presence of blepharicerids in the rugged hills of Cameroon and southern Nigeria (Germain *et al.* 1967; Kirk-Spriggs & Stuckenberg 2009: 165), thousands of kilometres from their nearest relatives in southern Africa. The hills of Cameroon–southern Nigeria are a well-known endemism centre for numerous animal and plant groups, and are one of the most significant Ice Age refugia in Africa.<sup>1</sup>

During the Neogene there were also dramatic episodes of uplift (over a kilometre in some cases), that affected southern Africa. This, coupled with the onset of significant glacial episodes in the Pleistocene, opened cool corridors for temperate taxa of the Northern Hemisphere to intrude deep into Africa, these species surviving to the present day in African highlands or in temperate areas at low latitudes in South Africa. These taxa Brian termed 'boreal elements' and off-the-cuff he could name examples of this phenomenon amongst the Opomyzidae, Diastatidae, Sciomyzidae, Agromyzidae<sup>1</sup>, etc. (see discussions in Stuckenberg 1974, 1982, also Kirk-Spriggs & McGregor 2009).

In 1969 Brian published the paper 'Effective temperature as an ecological factor in southern Africa' (Stuckenberg 1969). Given the general interest in this subject, the article

is one of his most frequently cited contributions. The main purpose was to ascertain whether a concept developed by an American geographer, Professor H.P. Bailey, concerning the biological importance of the warm periods of the year, could meaningfully be applied in southern Africa. Brian discussed the significance of Bailey's Effective Temperature (ET) theory, used to express the relative warmth and duration of the warm period of the year. He demonstrated a close correlation between the distribution of snakes in southern Africa and the perceived ET zones. He further calculated the effect an assumed reduction in mean annual temperature of 5 °C would have had during the last glacial episode of the Pleistocene.

#### CLADISTICS

During his 1965 trip to Europe Brian was to meet [Emil Hans] Willi Hennig (1913–1976) (Fig. 18), for the first time. Brian was always most complimentary about Hennig, but noted that he did not like to be contradicted. During Brian's one-day visit to Stuttgart, Hennig was working on his major review of Baltic Amber Diptera (Hennig 1965). Hennig showed Brian a draft of the manuscript and Brian pointed out that Hennig had incorrectly cited the locality of the sciomyzid genus *Salticella* Robineau-Desvoidy as Madagascar rather than Lesotho. Hennig was disbelieving and dug out the relevant paper there in his office. Only when he had confirmed that Brian was correct did he reluctantly admit his mistake. Brian observed that the temperature in the room 'had cooled appreciably'.<sup>1</sup>

Although a staunch adherent of Hennigian phylogenetics, Brian was nonetheless alert to opaque areas of Hennigian thought and in his book review of volume 3 of the *Manual of Nearctic Diptera* (Stuckenberg 1990: 205–206), wrote the following. 'Hennig introduced the concept of a "groundplan" in a special form ... from my own experience, I have at times been led to question the reality of the concept, or at least the manner of its application. There is no alternative but to assemble a "groundplan" on the basis of known taxa, but the procedure contains hidden assumptions, especially that no extant taxon is significantly older than the period at which cladogenesis produced the fundamental dichotomies leading to divergence in the assemblage of taxa being considered. Two exchanges which I had with Dr Hennig illustrate the problem. In 1960 I described *Lampromyia namaquensis* [Stuckenberg 1960: 228] as the only known brachycerous fly with five radial veins. Hennig (*in litt.*) contested this interpretation of the venation, saying that this species must have undergone a "reactivation" (a secondary reversal to an apparently more plesiomorphic state), because a four-branched radial sector was part of the groundplan of Brachycera. This response implied a degree of certainty about the monophyly of the orthorrhaphous Brachycera that was, in my view, not justified: it may indeed be that Vermileonidae are the modern remnants of an ancient lineage in which reduction of the radial veins has been an independent development associated with narrowing of the wing. That Hennig could be ambivalent about maintaining the integrity of a groundplan based on what must inevitably be the extant survivors of a nebulous thicket of ancestral clades, emerged during a conversation I had with him in 1965 [see above]. He showed me examples of the two species preserved in Baltic amber which he attributed to Lauxaniidae (Hennig 1965: 105), and when I protested that they had chaetic features possessed by no living lauxaniids, he shrugged and said that fossils often had characters not found in the living fauna!'.<sup>2</sup>



Despite such disagreements, relations between Hennig and Brian remained cordial and Brian was to meet Willi Hennig for the last time at the International Congress of Entomology in Canberra, Australia, in August 1972. Brian mentioned a photograph taken at the Congress of himself, Willi Hennig, and Frank and David McAlpine posing together. Seldom have four more knowledgeable and accomplished dipterists been assembled together for a single photograph!<sup>1</sup> Unfortunately efforts to trace a copy have proved unsuccessful.

With such a thorough grounding in Hennigian phylogenetics, he also expressed reservations about later developments in the discipline, such as pattern cladistics. Although he did not record his objections on paper he was dismayed at the often sloppy morphological work undertaken by certain modern taxonomists (see also comments in Stuckenberg 2001). He was also unhappy with the simple characters chosen for cladistic analysis and the naïve coding for data matrices, having always been a strong supporter of Hennig's 'Kriterium der Kompliziertheit der Merkmale', that is the criterion of character complexity; in short, complex characters being more likely to be reliable synapomorphies than simple ones.<sup>1</sup>

#### MUSEUM

Brian was clearly destined for higher office and in 1972 he visited a number of Australian museums, reporting that the Natal Museum compared favourably in certain respects, such as exhibitions and research, but that there was much to learn from them in other areas, particularly in respect to training procedures for technical staff and in their spectacular exhibits (Guest 2006: 125).

Brian was appointed Editor of the *Annals of the Natal Museum* (now *African Invertebrates*) in 1964, after Reginald Lawrence stepped down. The onset of Brian's period of editorship heralded a time of change for the *Annals*. Upon his appointment Brian was immediately tasked with producing a *Festschrift* in honour of Dr Lawrence, and with contributions from scientists, mostly from overseas, it constituted the entire Volume 16. With other pressing Museum commitments, Brian was relieved to step down as Editor in 1977, when he was succeeded by Jason Londt (Stuckenberg & Mostovski 2006). Brian continued his involvement in the *Annals* as the most active member of the Editorial Board right up to the time of his death, as well as serving on the panels of several other scientific journals, e.g., *International Quarterly of Entomology* and *Cimbebasia*.

With Brian's promotion to Assistant Director (1972–1976) and later appointment as Director (1976–1994), he was obliged to dedicate considerable time to his administrative duties and broader museological issues. This, coupled with his involvement with the South African Museums Association, inevitably reduced the time Brian could dedicate to dipterological research (Londt & Deane 2009), and there is a marked drop off in the number published scientific papers during the 1980s (see Appendix I).

Brian was a shy man, but realising that his position as Director made him something of a public figure and would require him to speak at various gatherings, he consciously honed his speaking skills. As a result, he became an entertaining and sought-after speaker whose diffidence and modesty could hardly conceal the immense authority with which he could speak on a wide range of topics (Londt & Deane 2009).

During this period Brian branched out into other areas of research. The acquisition by the Natal Museum of some bronze cannons, coins and other artefacts from the Portuguese

ship *Santiago*, wrecked in the Mozambique Channel in 1585, led Brian into the field of marine archaeology and a general study of Portuguese voyages of exploration off the south-eastern coast of Africa (Londt & Deane 2009).

Brian's studies of Portuguese shipwrecks were based on fieldwork in South Africa, with documentary and cartographical research at the Natal Museum, at libraries and archives in Lisbon, and in the United Kingdom, at the National Maritime Museum and the Royal Navy Hydrographical Archives (overseas visit in May 1993).<sup>2</sup> Two major publications resulted (Stuckenberg 1997, 2000a). Brian was elected as a Member of the *Academia de Marinha* in Lisbon, Portugal, in recognition of his research on 16<sup>th</sup> century shipwrecks and attended three of their conferences, in 1985, 1995 and 1999.<sup>2</sup> In 1999 he was jointly awarded the prestigious *Prémio Almirante Teixeira da Mota* Prize from the *Academia de Marinha* for solving the mystery of the 1585 shipwreck of the *Santiago* (Anonymous 2009; Londt & Deane 2009).

Brian was passionate about the educational role of museums, especially in communities where schooling was inadequate, and under his Directorship the Education Department of the Natal Museum welcomed increasing numbers of children to the museum and also actively took the services of the museum out to the community, especially the deprived areas around Pietermaritzburg (Londt & Deane 2009). As early as 1965 and 1966, during his protracted research visits to European museums, Brian had made a point of spending time in galleries and displays in all the museums he visited in order to glean ideas on effective display techniques and innovations.<sup>14</sup> In June–July 1990 he spent time in the United States, Canada and the United Kingdom, chiefly visiting museums that excelled in presenting science to children (Londt & Deane 2009), and in researching ways to make science fun for children and help them adapt to a technological society, with the aim of fostering careers in science (Anonymous 2009). During this trip he visited eight museums in the US, two in Canada and two in the UK.<sup>25</sup> What he saw resulted in innovations and new directions in the Natal Museum (Londt & Deane 2009).

During a tour of leading German museums as a guest of the Government of West Germany in 1989,<sup>2</sup> Brian was shocked to discover that there were no historical artefacts depicting Nazi Germany. As he wrote at the time: 'Through museums you can discover your own history and culture. I suppose museums can make you angry or proud' (Anonymous 2009). Brian touched on these and other points of relevance in the prestigious *Ninth George Campbell Memorial Lecture* he was invited to deliver at the University of Natal in 1993, entitled: *Archimedes in his bath: museums and their search for realism and relevance* (Fig. 23, top).<sup>23</sup>

Brian was a member of the South African Museums Association for over 40 years, was a regular participant at their Annual General Meetings and published a number of highly-relevant museological articles in the Association's *Bulletin*. During his period as Director, Brian was also a member of various national committees that were appointed to investigate and report on museum affairs in South Africa,<sup>2</sup> including the Foundation for Research Development Committee for Museum Sciences. Some of Brian's conclusions can be seen in his unpublished (1992) report, *Museums in a time of educational crisis*.<sup>24</sup> He was also Vice-President of the Association of Directors of National Collections, and Vice-Chairman of the Committee of Heads of Declared Institutions.

With his characteristic willingness to embrace new ideas and change, Brian was particularly interested in generating awareness of museums as instruments of social

# Museums and their crucial role in confronting our dark past

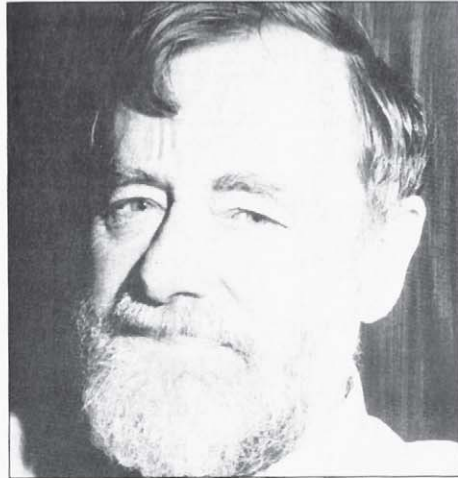
The ninth George Campbell Memorial Lecture was delivered recently by Brian Stuckenberg, director of the Natal Museum in Pietermaritzburg. This is an abstract of that speech.

**M**USEUMS in South Africa are heavily burdened by the colonial past.

How, then, do our museums respond to democratisation in South Africa? I must start my answer with some generalisations. Representing all sectors of society presents peculiar problems to museums in any country. By their very nature, poverty and ruralism generate few enduring artefacts. The contribution of the poor and the peasantry may be in demography, performing arts, language and food. It is also not always clear what relevance the "past" has in Third World circumstances. For people who have been oppressed by poverty and politics, only the future may be of interest.

In South Africa, where apartheid compounded such problems by forging a linkage between class and race, what is most authentically "black" in our museums is our collections of ethnology — the material products of old indigenous crafts. In our galleries you can see sophisticated beadwork, fine metalwork, wonderful baskets, sensitive woodcarving, traditional pottery — but blacks, especially the younger ones, may disregard this evidence of their cultural history. For them, the circumstances of their lives under apartheid may be their most exclusive form of self-identification — just as slavery will forever be the main focus of negro history in America.

For me, as director of a museum charged with preserving evidence of our changing times, issues like these were highly problematic. I accepted that the time had come for museums to take chances — to risk making some of our public angry. But how and when should we address the collapsing apartheid era? It occurred to me that I might be informed by examining another society that had suffered extreme social and political trauma, so in 1989 I went to West



Brian Stuckenberg, director of the Natal Museum

Germany, as a guest of the German government. I wanted to see how museums there might be helping the German people to come to terms with the Nazi years.

I thought my timing was good. I arrived the day after the centenary of Hitler's birthday, and I expected much media coverage and special exhibitions, but there seemed to be hardly anything. I was perplexed to find no significant museum of Nazi history in West Germany. Not one of the 26 major museums I visited had even tried to collect Nazi memorabilia. Their directors usually expressed surprise at my expectation that they would have done such a thing. "Why should I collect Nazi art?" one of them exclaimed. "It was bad art."

It was in West Berlin that I found some relevant exhibitions. There is a small,

simple museum, aptly called *The Topography of Terror*, built over some underground torture rooms once used by the Gestapo, where the holocaust is recalled in exhibitions of brutal frankness. According to the attendant, Germans rarely visit it. In the museum of transport and technology, among gleaming locomotives, was a cattle truck once used to take Jews to Auschwitz. Standing to one side for a while, I watched the reactions of visitors: Germans moved on abruptly when they realised what it was — only foreign tourists stayed to read the labels and look at the horrendous photographs of Jews being trucked to their death. Only a few kilometres away there was a wonderful private museum — the Checkpoint Charlie Museum — at that notorious border post. It was dedicated to the subject of escape from the confinement of the

Berlin Wall and the barbed wire along the border; its themes were freedom and the need for peaceful change. It was the most crowded museum I have ever been in, and most of the visitors were Germans.

A few museum directors said that the Nazi period was too recent; old people who had lived through the pain of it all wanted to forget it — and young Germans maintain it has nothing to do with them. Nobody would venture a guess as to how many decades, or even generations, should pass before the people could come to terms with it. "But shouldn't you be collecting for the future?" I asked. It was suggested that if I wanted to see Nazi memorabilia, I should look in the United States.

While drafting this speech, I mulled over the contrast in acceptability between those museums in West Berlin — the one at Checkpoint Charlie, and the *Topography of Terror*. It dawned on me that even a society in severe trauma is never homogenous — that by no means all Germans were Nazis — and that it is almost impossible to escape the social consequences of history. You may see those consequences unfolding around you, but not comprehend how you are, in a sense, being victimised. In conditions of social trauma, escape in either a literal or a figurative sense becomes compulsive. The Berlin Wall was a sort of metaphor for an appalling past — and release from that past was symbolised in the many daring escapes celebrated in the Checkpoint Charlie Museum. Its exhibits seemed to be saying: "Look — although we were trapped by overwhelming circumstances, we wanted to be free — our ingenuity and bravery, our willingness to risk death, show us, after all, to be people of worth."

In South Africa, we see escape in the literal sense by emigration, and we can see also signs in the white community of the appearance of a collective amnesia suggestively like that in Germany. I believe we cannot pretend that apartheid never occurred, and I am convinced that our museums must be active champions of cross-cultural respect, sympathy, tolerance and equity. We must act now to help our society to confront that traumatic period as frankly and as quickly as possible.

In May this year we staged *Amandla*, our first apartheid exhibition. The most favourable reaction came from whites, but some were offended — "So that's the sort of place this is — I'll never come here again!" said one.

## Legacies of apartheid on display

"AMANDLA: the struggle for human rights, peace or violence" — an exhibition of photographs and other legacies of apartheid — opened at the Natal Museum yesterday.

At the entrance of the museum is a range of colourful artefacts tastefully arranged to trace the history of anti-apartheid democratic movements, including political organisations both past and present.

Trade unions are also featured.

An array of apartheid signs, banning orders, passbooks and a wide range of T-shirts, banners, posters, placards and memorabilia from the "struggle", as well as a section on white elections are all featured.

A display on detentions, detainees, security legislation and forced removals depicts the harsh consequences of apartheid.

The violence that has racked the Pietermaritzburg region since the late 1980s is brought alive by a unique exhibition of black and white pictures which show victims crying out in pain and ravaged townships left deserted and empty.

Three life-sized pieces of the Berlin wall form the central exhibit at a cubicle which branches off into the struggle for freedom in Eastern Europe.

The international perspective also features Mahatma Gandhi and American civil rights leader Martin Luther King.



Fahima Khan (8) was born at the time when the United Democratic Front, the now defunct anti-apartheid organisation, was banned. At the exhibition, the UDF is brought to life by this sculpture and posters of the organisation. — Picture by Mike Mathewman.



**SPECIAL EXHIBITION**  
Of recently collected material from the apartheid era.



The exhibition *Ten Centuries of History*, to be opened in the Natal Museum today, is being staged by the local Portuguese Society. Museum director Brian Stuckenberg spent a week in Lisbon recently, where he researched the wreck of the Portuguese ship *Santiago* which occurred in 1585. He is pictured here sitting on one of the bronze cannons recovered from the wreck site. — Wireless Photographer.

change and national reconciliation. The following extract from his chapter on the Natal Museum (Stuckenberg 1988), published in the book *Pietermaritzburg 1838–1988: a new portrait of an African city*, serves to illustrate Brian’s thinking in this regard: ‘Examination of purpose, roles, and social obligations, are the contemporary concern of museums worldwide; in South Africa such matters are especially urgent because of the rapidly changing and deeply divided nature of our society. Demographic trends pre-saging changes in the racial composition and distribution of our society, the continuing loss of traditional values, and the possible emergence of new economic orders, as well as a mounting debate about education ... are forcing a phase of critical self-evaluation in South African museums. It is already apparent that their traditional form, cast from British and European moulds, may by now have resulted in their having little appeal and uncertain relevance for disadvantaged communities.’

Linked to his interest in the educational role of museums, Brian served for 13 years as a member of the panel of experts on the weekly radio programme ‘*Talking of nature*’, by the South African Broadcasting Corporation’s Durban studios (Guest 2006: 244).

Under Brian’s Directorship the Natal Museum hosted the first apartheid exhibition to be staged in South Africa, in 1993. This was entitled: *Amandla – The struggle for human rights, peace or violence?* (Fig. 23), and was the first exhibition of its kind to display historical artefacts from the apartheid era in a South African museum (Anonymous 2009) (Fig. 23, bottom left and right centre).

As well as being an outstanding scientist Brian was also a very humane man, who had the ability of putting everyone he spoke to immediately at their ease, irrespective of their background. One of his greatest attributes was his great loyalty to his staff; he always saw the good in them. He would visit each department every Friday afternoon and kept up to date with the research activities at the museum – in all disciplines. He remembered the activities staff members were engaged in and kept them on their toes regarding progress. He also had an incredible memory regarding pertinent and previous publications relevant to the research topics of staff.<sup>30</sup>

Brian actively encouraged studies of the earthworms at the Natal Museum, having developed interest in the group as a student at Rhodes. He was instrumental in the appointment of Jadwiga Danuta Plisko, the leading taxonomist on African earthworms. On their joint field trips to the western part of South Africa Brian often engaged himself in digging into hard Namaqualand soil; he also collected earthworms in all other parts of South Africa and even while visiting Chile. Brian’s endless efforts and continuous support of this endeavour resulted in collecting 455 samples of almost 2500 specimens and in adding 122 new species of indigenous microchaetids and acanthodrilids to the museum’s Oligochaeta collection, which became largest in Africa (J.D. Plisko pers. comm., 2012).

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Fig. 23. Newspaper cutting documenting some major public events at the Natal Museum during Brian’s tenure as Director (1976–1994): prestigious Ninth George Campbell Memorial Lecture delivered by Brian in 1993 (*Natal Witness* 9 November 1993: 7) (top); details of the opening of South Africa’s first apartheid exhibition: *Amandla – The Struggle for Human Rights, Peace or Violence?* (1993) (*Natal Witness* 17 June 1993: 3) (bottom left and right centre right); Brian pictured with the Portuguese bronze cannons at the opening of the exhibition *Ten Centuries of History* (1993), staged by the local Portuguese Society at the Natal Museum (*Natal Witness* 10 June 1993: 3) (bottom right). (Courtesy KwaZulu-Natal Museum)



The esteem and affection in which Brian was held, was reflected in a gathering of family, friends and colleagues on 16 February 2009 at Umgeni Valley in Howick in celebration of his life. As David Barraclough wrote, ‘There was no religious ceremony at all. One and a half hours—almost—of tributes from people from ALL walks of life. He held such wide respect from so many people. He was like a second father to me in many ways and I will miss him tremendously ... It was Brian’s day and it deserved to be!’<sup>22</sup>

I last met Brian in 2008, when he attended his grandson Tristan’s graduation from Rhodes University, 55 years after he had himself graduated from there. He visited me at the Albany Museum, and we spent several wonderful hours discussing things dipterological and biogeographical.

#### ACKNOWLEDGEMENTS

I am indebted to Brian’s widow Pamela and the Stuckenberg family for information and images they provided, Gregory B.P. Davies (formerly of the KwaZulu-Natal Museum), for use of information and selected passages from his unpublished manuscript, and staff of the KwaZulu-Natal Museum, especially Sibongile Jali (Assistant Librarian), without whose assistance this paper would not have been possible. Information regarding Brian’s Masters thesis was provided by Sally Scharmm (Cory Library for Historical Research, Rhodes University, Grahamstown, South Africa), and a copy of Brian’s matriculation examination results by Cheryl M. Crulci (Grey High School, Port Elizabeth, South Africa). Hugh Eales (Professor *Emeritus*, Department of Geology, Rhodes University, South Africa), provided biographical details of Edgar Mountain. Figs 14, 15, 17 and 18 were provided by Neal L. Evenhuis (Bishop Museum, Honolulu, Hawai‘i, USA). Other photographs and/or scans were provided by Greg Courtney, Mike Mostovski and Burgert Muller. Mike, Burgert and Marc Pollet assisted with information and/or publications. I am grateful to Pamela Stuckenberg, Greg Davies, Jason Londt, Hans Ulrich, Jadwiga Danuta Plisko and David Barraclough, who read a draft of the manuscript, and to an anonymous referee, who provided useful improvements and suggestions. This paper is based on a presentation delivered during the Symposium ‘Advances in Afrotropical Dipterology’ at the 7<sup>th</sup> International Congress of Dipterology, 8–13 August 2010, San José, Costa Rica (Kirk-Spriggs 2010).

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**Appendix I. Bibliography of Brian Roy Stuckenberg (1930–2009).****1950s**

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**Appendix II.** Exact transcription of Brian Stuckenberg's first Madagascar Expedition itinerary (1956–1957), from the unpublished '*Report on the expedition to Madagascar, 6<sup>th</sup> December to 1<sup>st</sup> February 1956*', by R.F. Lawrence (undated), pp. 1–2; in the archives of the KwaZulu-Natal Museum. Appendices II and III are included here due to the historical significance of the two Madagascar Expeditions and to provide additional information on the collection localities.

1. Perinet (12–20 December [1956]). This was an excellent collecting locality for all types of animal life and much material was obtained; the accommodation at the forestry station was occupied and we lived in the native village where water for drinking and working was very difficult to obtain.
2. Ranomafana (21 December [1956]) was disappointing with little natural forest; we spent only 24 hours there to obtain a sample of the fauna.
3. Fenerive, East coast (22–29 December [1956]). Good collections of the fauna typical of the East coast of Madagascar were made along the North which we visited daily. Returning to Tananarive along the same route, we spent a day collecting in a forest near Moramanga characterised by streams with numerous waterfalls and sandy pools. Turning over some stones in search of aquatic insects Mr. Stuckenberg found these to contain specks of gold; some rock samples and sand containing gold particles were taken back to Tananarive and submitted to the Geological Survey of the Madagascar Government.
4. Manjakatempo Forest Station, Ankaratra Mts. (3–9 January [1957]). After overhauling our collecting apparatus and stores at the Institute [Institut Scientifique de Madagascar] we set out on the 3<sup>rd</sup>, making the forest station at Manjakatempo our headquarters. Much collecting was carried out in the surrounding forests and at various other higher stations along the mountain road. Collections of insects were also made at night with a lamp and a day was spent on the highest peak of the range at Tsiafajarona (7,500 ft. altitude).
5. Tsaramandroso near Majunga (12–16 January [1957]). Returning again to Tananarive we started on the 12<sup>th</sup> for Tsaramandroso at 3 a.m. reaching it after a drive of 15 hours. The forests here were growing on a sandy substratum and though much less rich than those of Perinet or the Ankaratra Mts., contained a rather different fauna with an abundance of biting and sucking flies.

**Appendix III.** Exact transcription of Brian Stuckenberg's second Madagascar Expedition itinerary (1957–1958), from his unpublished '*Report on the Expedition to Madagascar*' (undated), pp. 2–6; in the archives of the KwaZulu-Natal Museum (refer to Fig. 11).

### 1957

- 2–9 Nov. Tananarive – a week spent in arranging the details of the itinerary and in preparations for forthcoming trips.
- 9–23 Nov. (1) NOSSI-BE – by aeroplane to this small island off the N.-W. tip of Madagascar at about 13°20'. Resided in Guest House at Oceanographic Station. Collected in Lokobe Forest, a small, residual rain forest growing on steep slopes, between sea level and approx. 100 m. Climate extremely hot. Collecting good, better after arrival of rains.
- 23 Nov.–4 Dec. (2) ROUSSETTES FOREST STATION, MONTAGNE D'AMBRE, DISTRICT DIEGO-SUAREZ – by aeroplane and car. Resided in Forestry Department House. Collecting done in magnificent lower montane forest at 1000 m. and in grassland at about 840 m. on forest fringe. Climate cool and wet. Collecting excellent, particularly for shade-loving forest flies.
- 4–9 Dec. (3) DIEGO-SUAREZ – I was obliged to wait here for a plane connection. Some collecting done on rocky shores of bay and around saline pools.
- 9–11 Dec. Tananarive – by aeroplane. A brief stop to allow for storage of specimens and for preparation for next trip.
- 11–15 Dec. (4) MANJAKATOMPO FOREST STATION, ANKARATRA MASSIF, DISTRICT AMBATOLAMPY – by car. Collecting carried out at the following localities within this area:
- Vieille Forêt – An upper montane rain forest, well preserved, cool and humid, at about 1700 m.
- Lac Froid – an artificial dam at 1620 m.; many flies taken on yellow *Senecio* flowers on banks, lacustrine forms abundant.
- Col de Mahafompen – the highest point on the road between Ambatolampy and Faratsiho, where it crosses the Ankaratra Range. Collecting on steep, grassy slopes and along small torrents, between 2200–2400 m.
- Sommet de Nosiarivo – a high point (2000 m) from which it was possible to gain access to upper limit of rain forest. Cool and humid. Trees stunted and matted with lichens and moss.
- 15–18 Dec. Tananarive – an enforced period of rest due to conjunctivitis which resulted from eye strain.
- 18–24 Dec. (5) MORAMANGA – by car. Resided at hotel and collected in company with Dr. and Mrs. Keiser. Collecting in degraded lower montane rain forest in hilly country along route to Anosibe up to pt. km. 29, poor owing to dryness. Some interesting specimens taken around reservoirs near town.
- 24 Dec.–2 Jan. (6) STATION AGRICOLE, LAC ALAOTRA – by rail-car. Resided in Guest House. Diptera collected in open grassland and marsh vegetation at about 1400 m. Species limited in number but very interesting.

### 1958

- 2–9 Jan. Tananarive – this period was occupied by preparations for forthcoming expedition to Andringitra and the south. Interrupted by a one-day trip.
- 6 Jan. (7) AMBOHITANTELY FOREST, ANKAZOBE DIST. – by car, approx. 120 kms. N.-W. of Tananarive, a residual patch of forest in savannah country of fair relief. Numerous small patches of forest in the vicinity suggest that the whole area was once forested and has recently been denuded. A number of peculiar species taken.
- 9 Jan. Ambalavao – by car, a one-day trip to this, the jumping off point for Andringitra. In company of Dr. R. Paulian and M.P. Griveaud.
- 10 Jan. (8) ANTANIFOTSY – by car, a small village in the foothills of the Andringitra Range. Good collecting at Jomandao River (1650–1675 m.) and in heath vegetation near village.

- 11–14 Jan. (9) PIC BOBY – the summit of the Andringitra Range. Our material was moved up by porters and we camped at 2460 m. in a small col below the peak itself. Good collecting along rivers and in alpine heath vegetation, also at light during evening. Many interesting species found. Climate cool to very cold, often very wet.
- 14–17 Jan. (10) SOAINDRANA PLATEAU (2060 m.) by foot. Camp was moved to this plateau below the main backbone of the range. Prairie vegetation, grass and low shrubs, with some mixed bush on steep slopes. Collecting done in all vegetation types, at light. Much material obtained. Climate cool, often overcast, and thunderstorms frequent.
- 17–21 Jan. (11) ANJAVIDILAVA (2020 m.) by foot. Third camp established just below crest-line of escarpment. A magnificent rain forest was close at hand, extending sea-wards as far as the eye could see. This forest produced many very interesting species.
- 19 Jan. (12) KIMORO RIVER – I penetrated with two assistants into the big forest mentioned above, and succeeded in reaching a fine torrent at 1680 m. where some very good insects were taken.
- 21–24 Jan. (13) AMBALAMAROVANDANA FOREST at VAKOANA RIVER (1520 m.). Fourth camp established in sheltered valley to west of watershed. Good collecting in forest and along Vakoana and Antsifotra Rivers; many flies taken at M.-V. light in evenings.
- 24 Jan. JOMANDAO RIVER near Antanifotsy. This spot was visited a second time in order that I might obtain certain desiderata. We broke camp the same day and left the area by car.
- 24–26 Jan. Ambalavao – I was left at the hotel and the rest of the party returned to Tananarive. No collecting could be done as my equipment had been forwarded to the next station.
- 24 Jan.–4 Feb. (14) RANOHIRA (860 m) – by bus. Resided in hotel. This small town is on the western side of the Horombe Plateau and on the eastern edge of the Isalo Range. Country of quite a different type to that experienced elsewhere. Plateau covered with sparse grass, productive mainly around small, stagnant streams. Isalo Range also explored, a curiously eroded chain of creamy and reddish rock outcrops, characterized by a distinctive flora, including *Pachypodium* and *Tapia*. Climate hot and rather dry.
- 4–10 Feb. (15) LAMBOMAKONDRO FOREST, SAKARAHIA DISTRICT. By car in company with M.P. Griveaud, M. Wells and two assistants. A strange deciduous forest, growing in gently undulating sandy country at about 550 m. Many butterflies on wing, but collecting otherwise very poor. Climate hot, wet at that season. An excessive number of biting insects and urticating plants present.
- 10–11 Feb. Tulear – the principle port of the south-western coast, where we stopped for supplies.
- 11–13 Feb. (16) ST. AUGUSTIN – a village on the coast just south of Tulear, at the mouth of the Onilahy River. Collecting on beach and sand dunes, and at light. Some interesting species taken. Surrounding country of limestone, with a highly peculiar, thorn xerophytic bush.
- 13–16 Feb. (17) SEPT LACS (100 m.) – a point on the north bank of the Onilahy River, between Tulear and Tongobory. Country of limestone, vegetation dry and thorny, gallery forest present along river banks. Some aquatic and mud-frequenting Diptera were taken, collecting otherwise not very good.
- 16–18 Feb. (18) AMPANIHY (250 m.) – a small town in the dry country of the south. Topography flat, soil bare and sandy, vegetation scrubby and very mixed, with baobabs, Aloes and Euphorbiae. Diptera collecting along a watercourse and in open clearings in bush, not numerous.
- 18–20 Feb. (19) TRANOROA AREA (210 m.) – we were held up for 3 days on the north bank of the Menarandra River because the low-level bridge was submerged under flood waters. Collecting poor. Country very similar to previous station.
- 20–21 Feb. (20) BELOHA (175 m.) – a small town in very dry, hot, flat, sandy country with unwellcoming, thorny vegetation (including *Alluaudia*). Collecting poor.
- 21–22 Feb. Fort-Dauphin – we stopped at this small port for repairs to the car and for supplies.
- 22–24 Feb. (21) STE. LUCE – a village on the east coast not far north of Fort-Dauphin. Many very interesting littoral flies taken.
- 24–26 Feb. (22) ISAKA FOREST, SAKAVONDRO DISTRICT – in mountains about 60 kms. north of Fort-Dauphin. Collections made in montane rain forest at about 225 m. Some interesting species taken. Fauna rather similar to that of escarpment forests further north.



- 26–28 Feb. The journey of over 1000 kilometres back to Tananarive occupied 3 full days.
- 28 Feb.–9 Mar. Tananarive – this period was spent in resting, in preparations for forthcoming trip, in storage of material, and in sorting out Diptera belongs to I.R.S.M. [Institut Scientifique de Madagascar].
- 9 Mar. Spent in travel from Tananarive to the coastal town of Tamatave, in company with M. Griveaud and two assistants.
- 10–14 Mar. (23) IVONTAKA – a small village on the east coast about midway between Tamatave and Maroantsetra. A number of very interesting littoral and forest flies taken. Here the rain forest extends right down to sea-level.
- 14–16 Mar. Maroantsetra – a town in the head of the Bay of Antongil, where we stopped for provisions and to make arrangements with M. Vadon regarding our next collecting station.
- 16–20 Mar. (24) AMBODIVOANGY – Diptera were collected in a fine, well-preserved rain forest covering a low range of hills barely 1 km. from the sea and not 30 m. above sea level. Climate hot and humid. Some very interesting material obtained.
- 20–25 Mar. (25) NAVANA – a large village on the coast in the head of Antongil Bay, east of Maroantsetra. Neighbouring forests largely destroyed or degraded by agriculturally-minded residents. Collecting consequently poor, but some interesting species taken.
- 24 Mar. (26) AMBOHITSITONDROINA MT., MAHALEVONA DIST., east of Navana. This mountain is at the base of the great peninsula forming the eastern side of the Bay of Antongil. Collecting up to 500 m. was done in the magnificent leech-infested rain forest, but no great amount of material was obtained due to persistent, heavy rains.
- 25–26 Mar. Maroantsetra – for supplies and to make arrangements for our next camp.
- 26–29 Mar. (27) SAHASO RIVER, FAMPANAMBO DISTRICT – north of Maroantsetra. Collecting done in lower montane rain forest at low altitude. Country rugged, climate very hot and humid. Few Diptera.
- 29–31 Mar. Maroantsetra – a rest period.
- 31 Mar. Seranambe – night stop.
- 1 Apr. (28) ANTANAMBE – night stop and some collecting.
- 2 Apr. Mahombe – night stop.
- 3–8 Apr. Tananarive – final assembly, preparation and packing of material.